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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,759	10/14/2003	Li Wang	P0011118.00	3360
27581	7590	03/16/2010		
MEDTRONIC, INC. 710 MEDTRONIC PARKWAY NE MINNEAPOLIS, MN 55432-9924			EXAMINER ALTER, ALYSSA MARGO	
			ART UNIT	PAPER NUMBER
			3762	
			MAIL DATE	DELIVERY MODE
			03/16/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/684,759

Applicant(s)

WANG ET AL.

Examiner

Alyssa M. Alter

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 80-86 and 95-102 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 80-86 and 95-102 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. In view of the Appeal Brief filed on 10/27/09, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Carl H. Layno/

Supervisory Patent Examiner, Art Unit 3766.

Response to Amendment

The amendment to the pending claims dated March 30, 2009 has been entered even though the numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the

Art Unit: 3762

prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not). Since the amendment o the pending claims are improperly, renumbering of the claims is necessary. Please see MPEP 608.01(j) for further clarification.

Response to Arguments

Since it was not obvious to the Applicant that the 103 rejection of claims 73, 75, 80-86, 88, 90, 95-102 under Combs et al. (US 6,512,949 B1) *should have* been under Combs et al. (US 5,957,861 A), in accordance with the rest of the Office Action and the PTO-892 Notice of Reference Cited. The examiner has withdrawn the finality of the final rejection dated January 29, 2009 and a new rejection is set forth below to reflect the amendments made to the pending claims on March 30, 2009.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 80-86 and 95-102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Combs et al. (US 5,957,861) in view of Schuelke et al. (US 5,755,742). Combs et al. discloses a system to produce impedance measurements in a

subcutaneous portion of the body with at least two electrodes. "Also depending on the location of the electrodes used for measurement, it is wise to consider synchronization to the heart beat cycle and the respiratory cycles or the variation in measurement resulting from measuring at inconsistent times within these cycles may cause insurmountable difficulties in extracting useful signal from the impedance changes created by these cycles. (col. 6, lines 51-57). Therefore, since the impedance measurements are synchronized with the cardiac cycle, they are responsive to a cardiac event.

"The determination of pulmonary edema or local edema will be based upon comparison of long term average impedance value compared to the short term average value" (col. 9, lines 64-67). "A determination of how severe the disease is by how quickly the edema progresses (i.e. if the change was seen over the course of two weeks, versus one day) becomes a measure that has value to the patient and physician and can be a stored value kept in a memory circuit by a device made in keeping with this invention"(col. 9, lines 53-59). Furthermore, "Long term average preferably represents the number of days (in the most preferred embodiment three to thirty) while the short term average represents the number of hours (preferably one to forty-eight)"(col. 10, lines 14-18).

Combs et al. discloses the claimed invention except for assessing the integrity of the leads. Schuelke et al. discloses a lead integrity measuring system that measured impedance values to determine lead integrity failures. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified

the system of Combs et al. to include a lead integrity measuring system as taught by Schuelke et al. in order to provide the predictable results of ensuring the leads are in proper working order. Furthermore, checking the integrity of the leads would ensuring the sensed values are accurate.

As to claims 85-86 and 101-102, Schuelke et al. discloses a device with three leads where each lead has an electrode. Wherein the third electrode provides a cross check of measured impedance values. "Testing current and voltage lead integrity of at least one of the leads comprising the steps of and means for: selecting one of the at least three leads as a lead under test, a force lead and a measure lead; coupling the terminal of the lead under test to a fixed potential; driving an excitation voltage pulse in an excitation path including the terminal of the selected force lead, the force lead electrode/tissue interface, the lead under test electrode/tissue interface and the lead under test; measuring the excitation current value of the excitation voltage pulse delivered in the excitation path through the lead under test; and measuring an induced voltage in a measure path including the terminal of the selected measure lead, the measure lead electrode/tissue interface, the lead under test electrode/tissue interface and the lead under test". The lead impedance of the lead under test is derived from the measured excitation current value and the induced voltage value. In order to test the lead integrity of the remaining leads, the selection of the lead under test, the force lead and the measure lead are changed, and the test is repeated"(col. 4, lines 46-65). Therefore, the modified Combs et al. discloses performing a cross check of measured impedance values with a third electrode.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alyssa M. Alter whose telephone number is (571)272-4939. The examiner can normally be reached on M-F 8am to 4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Carl H. Layno/
Supervisory Patent Examiner, Art Unit 3766

/Alyssa M Alter/
Examiner
Art Unit 3762